



*Saskatchewan Parks and
Recreation Association Inc.*

Parks and Open Space Management

Turf Cutting Handbook





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Introduction and Disclaimer of Liability for Use of the Document

This Parks and Open Space Management Handbook, provides a description of procedures associated with maintenance activities performed within park settings.

The concept of maintenance standards requires the application of best practices within the local operation system. To assist with the establishment of such standards, this resource provides guidelines to aid staff in addressing their daily management operations. There are, however, situations where the standards outlined may require revision by those staff implementing the procedure, to best meet their needs. Specific site conditions, operating budgets, available human resources, and capacity to offer training associated with the practices outlined in this document may warrant alterations to the procedures.

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Turf Cutting Introduction



You're very proud to be a member of the Parks and Open Space Management Division within the community. You've been an equipment operator for a number of years and up until this weekend hadn't really thought about how what you do on a daily basis affects community residents and visitors. While attending the annual neighbourhood barbecue you were introduced to a couple that were visiting the area from the United States. They commented on the community's beauty and they couldn't get over how green, neat and tidy everything looked.

When you told them the majority of the trees were originally planted by hand, they were truly amazed. They commented that we certainly must be very proud of this accomplishment and want to protect what has been created.

During the conversation they asked what you did for a living. You began by telling them that you are an Equipment Operator for the community and a member of the Parks and Open Space Management Division. You mention that the Parks and Open Space Management Division maintains the parks, green spaces and athletic fields in the area. You tell them you are part of a team of people that uses the mowing equipment to maintain all of the turf areas. When they commented that you sure had a very demanding job, it made you think about how big the job was and what it is that you do every day.





Turf Cutting Overview

Prior to working as an Equipment Operator you never thought much about the length the grass should be cut. At home, you started your mower and mowed the lawn. Now that you've been with the community for a number of years you understand the importance of mowing turf to an appropriate height. You discovered turf that is mowed too short will often have a poorly developed root system resulting in a thin open turf that is very inviting for weed growth and disease.



To keep irrigated turf in a healthy, even-coloured, relatively disease and weed free condition with few bare patches and ruts.

Turf is cut to a uniform height with no scalped or missed areas.

In order to accomplish these goals you know that providing the right amount of water and fertilizer is very important. Keeping the turf mowed at the right height is also very important.





Parks and Open Space Management have a very efficient process for keeping the turf cut to an even height with no missed areas. You recall the way it works: the larger mowers mow the area first, followed by the trimming mowers and then finally the string trimmers.





Park Maintenance Classes

You think about the different types of open space areas located in your community. You know they've been divided into 4 different maintenance classes based on the level of service required to maintain the space. You review the Maintenance Class chart you received when you attended your original training many years ago.




CLASS	Description
	<ul style="list-style-type: none"> High use areas and parks requiring a great deal of attention. May have annual flowerbeds, planter boxes and perennial flowerbeds. All are kept as weed free as possible. Turf maintained at 3" height and cut twice a week. Irrigated areas watered by community workers once a week (1½" of water). Inspect and litter pick up: April – September, 7 days per week. Off-season, 5 days per week (Mon – Fri).
	<ul style="list-style-type: none"> Less used neighbourhood parks and areas requiring less attention. May have perennial flowerbeds — no annual flowerbeds or planter boxes. Turf maintained at 3" height and cut once a week. Irrigated areas watered by community workers once a week (1" of water). Litter pick up once a week during April – September only.
	<ul style="list-style-type: none"> Non irrigated. Receives less maintenance. Turf maintained at 5" height. Litter pick up once every 2 weeks during April – September only.
	<ul style="list-style-type: none"> Non irrigated. Maintained year round as coarse grass turf in a naturalized state. Grass cut to 8-10" height once per year (mid-summer). Litter pick up once every 2 weeks during April – September only.





Fine Turf Mowers

Next, you think about all of the types of mowers that are used to maintain the different irrigated areas.

Type of Mower	Used for
Trim Mower 	<ul style="list-style-type: none"> <input type="checkbox"/> Used in irrigated and non-irrigated fine turf areas where larger mowers can't fit. <input type="checkbox"/> Trims along fence lines, between trees, along edges, and around shrub beds. <input type="checkbox"/> It's best if this mower is used after the larger mowers have done their job. <input type="checkbox"/> The direction you travel is determined by the side where the chute is located on your mower, as you always make sure that clippings and debris are blown away from streets, sidewalks, flower beds and shrub beds.
10-12 Ft. Mower Midsize 	<ul style="list-style-type: none"> <input type="checkbox"/> Used in smaller irrigated areas and parks.
14-16 Ft. Mower Large 	<ul style="list-style-type: none"> <input type="checkbox"/> Used in large irrigated areas and parks.





Coarse Grass Mowers

You recall the rotary mowers that are used to cut coarse grasses in the non-irrigated areas around the community.

Whirlwind



- Used to mow non-irrigated coarse grass in areas such as Utility Easements where the Bat Wing is too large.
- The difference between the whirlwind and the Bat wing mower is the whirlwind has a solid deck while the bat wing has wings.

15 Ft. Bat Wing Mower



- Used to mow large non-irrigated coarse grass areas (for example: storm channels, flood plains, school grounds, highway rights of way, rural road shoulders).
- The Bat Wing mower has two wings that are raised during transport and then lowered to cut the grass.
- The chains along the wing are used to stop debris from being thrown.
- This piece of equipment can also be called a Rotary Cutter because there are large blades that rotate in order to cut the grass.





Safety Equipment Overview

From your past experience you know the importance of wearing the correct clothing and safety equipment. You recall the standard safety gear used by Parks and Open Space Management workers.

There are a number of pieces of safety equipment that are required when using mowers and other equipment. Always check to make sure the Roll Over Protection System on the machinery is not damaged.

Safety Gear

-  **Hard Hat - Required** (never worn backwards or over another hat and on all mowers except those with roll bar)
-  **Safety Vest - Required** (wear on all roadways)
-  **CSA Approved Safety Boots - Required**
-  **Safety Glasses - Required**
-  **Work Gloves - Recommended**
-  **Ear Plugs - Recommended**




Additional Mowing Safety Gear

Slow Moving Vehicle Sign

Fire Extinguisher





Safety First

Do not wear radio or music headphones. Using any type of equipment requires your full attention.



REMEMBER: ALWAYS WEAR YOUR SEAT BELT WHEN ON THE MOWER





Your Day Begins....





Your Day Begins

Your mind turns to the tasks that you perform on a daily basis.

Removing Clippings and Debris

As you arrive at the Depot each morning, the first thing you do is use the air compressor to blow off any grass clippings and dirt that may have gathered on the decks of the mower and around the radiator.

Circle Check

Next you do a 'circle check' by walking around the mower to check for worn, loose, cracked, broken or damaged parts. Every mower can be different but some of the things you check are:

You know a number of things can go wrong during a day of mowing, but the chances are reduced with a well-maintained machine and a responsible operator.

Note: Never put your finger over a hydraulic leak as the hydraulics are put under pressure and could injure your hand.

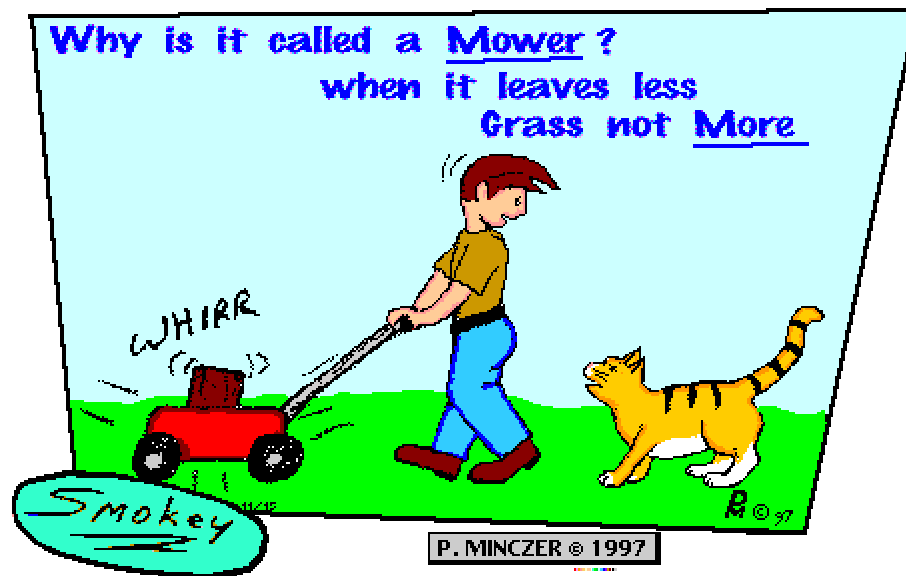


The items you check may be different depending on the type of mower you're using. You remember how the first few times you used a new piece of equipment you had to refer to the Operator's Manual to make sure you didn't miss anything.





Mower Basics





Mower Basics

Once you've completed the circle check of the machine you'll be using for the day, you review the things you have to keep in mind when operating any mower.



Getting on and Starting the Mower Safely

- ☒ Make sure you're on a level surface, not on a slope.
- ☒ Get on the mower from the left side of the machine — you will avoid bumping any controls or pedals.
- ☒ Sit on the seat. **NEVER STAND ON, OR BESIDE A MOWER WHILE STARTING THE MOWER**
- ☒ Fasten your seatbelt.



Parking A Mower Safely

1. Stop the machine on a level surface, not on a slope.
2. Disengage the Power Take-Off (PTO) and/or hydraulics.
3. Lower the attachments to the ground.
4. Lock the park brake.
5. Stop the engine and remove the key.
6. Wait for the engine and all moving parts to stop before leaving your seat.





Basic Mower Safety



Basic Mower Safety

- ☒ Keep your hands and feet away from the mower deck when the engine is running.
- ☒ Never carry passengers.
- ☒ You'll need to use extreme caution when mounting curbs. Use the curb cuts if they are available and make sure the blades aren't moving.
- ☒ Never add fuel while you smoke, or when the engine is running or hot.
- ☒ Add fuel outdoors where there is plenty of ventilation.
- ☒ You'll always lower any attachments to the ground before you service the machine.
- ☒ Always wear all required safety equipment and a hardhat if your mower does not have a canopy.





Transporting the Mower






Driving Safely on City Streets

As you climb aboard the machine, you remember back to the first time you were driving one of the mowers on the street. At the time, you were surprised at how different it was from driving a regular vehicle. You were a lot slower than the rest of the traffic and therefore you really had to keep your wits about you.



Safety First — Driving on City Streets

- ✓ You will have already blown the grass clippings and debris from your machine so you won't have to worry about clippings and debris spraying the traffic as you're driving.
- ✓ Because slower moving equipment is harder to see, it's important that you always use your flashing warning lights and headlights.
- ✓ Ensure slow-moving vehicle sign is clearly visible. 
- ✓ Always use your turn signals when turning a corner.
- ✓ Follow the rules of the road.
- ✓ Be courteous.
- ✓ Drive in the right hand lane whenever possible.





Turf Cutting Procedures





Procedures and Safety Tips

You remember the number of times you've arrived at a site and found a group of people enjoying their day in the park. You don't want to spoil the great time they're having, so you move on to your next scheduled stop and come back to this park later in the day.



Depending on the size of the park, you may want to scan the area to be mowed by walking through any long grass and remove any litter and debris before you start the mower. Most people use the trash cans that have been placed throughout the park, but you often run across glass, bottles, cans and other trash that's been left behind. You also know to check the areas

that are close to the street because chunks of pavement and concrete are often found there. Mowing over any of these objects can cause damage to the blades on the mower. More importantly, the blades of the mower can throw objects at a very high speed and long distance, injuring passers by, animals or property.

While you're checking for litter, you notice the trashcan by the big oak tree is full. You tie and remove the garbage bag and set it beside the trash can knowing the Roving Crew will be by to pick it up. You put a fresh bag in the trash can. If you know the Roving Crew may not be by for a couple of days and you're worried the trash can will fill up again before they do, you tie another garbage bag to the handle of the trash can.





Procedures and Safety Tips Continued....

From your past experience, you know there is more to mowing than sitting on a mower and driving around a park. You have to think as you're mowing and you have to be aware of other people's properties, trees, hillsides, your safety and the safety of others.



Safety First — Turf Cutting

- ☒ Debris thrown from a mower can seriously injure humans, animals and property. It's important that you always mow in the direction where grass clippings are blown away from streets, sidewalks, tree and shrub beds or people.
- ☒ Never mow over litter, cans, bottles, rocks, branches or other debris. It is much easier to stop and pick up an item than it is to clean up the pieces after the mower has shredded it. Also, hitting hard objects can damage mower blades.
- ☒ Stay alert for holes and other hidden hazards.
- ☒ Slow down before you make a sharp turn or operate on a slope.
- ☒ Drive up and down a hill – not across.
- ☒ Should you need to mow in reverse, carefully look down and behind the machine to make sure you're not mowing over anything you shouldn't be. Children and animals can move into the mowing area very quickly without you noticing.
- ☒ Make sure you shut off the blades when you're not mowing or before crossing roads or sidewalks.





More Turf Cutting Safety Tips



Safety First — Turf Cutting

- ✓ Slow down and be careful of traffic when operating near or crossing roadways.
- ✓ Stop mowing when pedestrians, especially children approach your machine.
- ✓ Watch for wet spots caused by rain, poor drainage or irrigation leaks. When the turf is too wet the tires on the mower can cause ruts that are very visible and time consuming to repair.
- ✓ Some mowers will damage turf when making tight turns or when climbing slopes, especially if the soil is very wet. Get in the habit of checking behind you as you mow to make sure the turf is mowing evenly and you're not causing any damage to the turf. If you are — **STOP IMMEDIATELY.**
- ✓ By looking at the picture on the right you'll understand why you should make sure you never mow over newly laid sod.





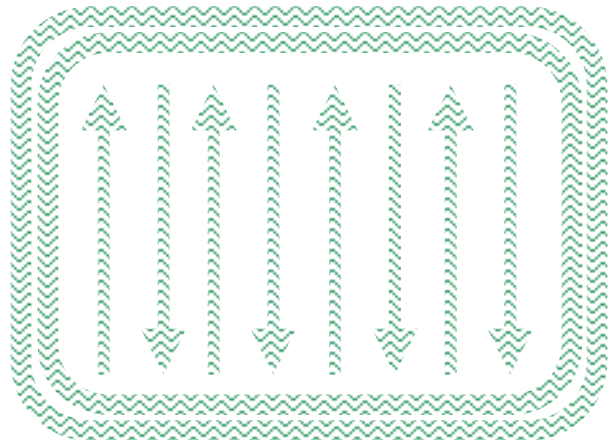
Turf Cutting Patterns

Avoid having the mower wheels or blades wear a path in the turf. It's important to mow in a different direction or pattern each time you mow an area. You always begin by mowing two rows around the outside border and then complete the middle section following a different direction each time (for example: week one: work the area horizontally, week two: vertically, week three: diagonally etc.).

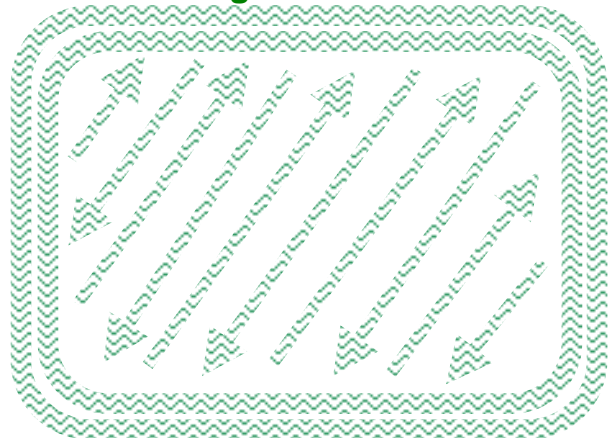
Horizontal Pattern



Vertical Pattern



Diagonal Pattern

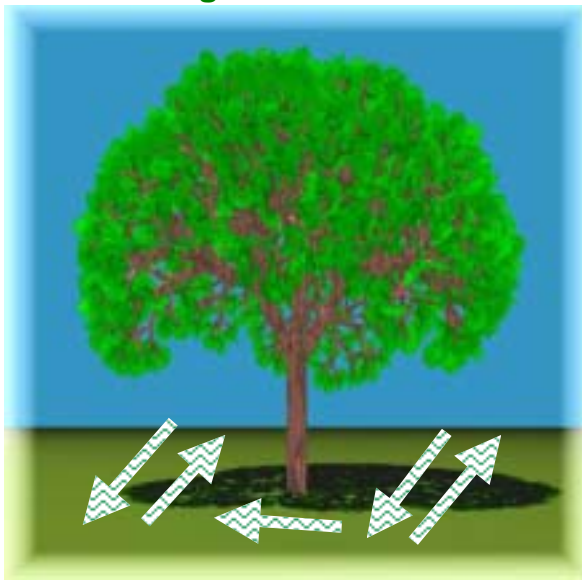




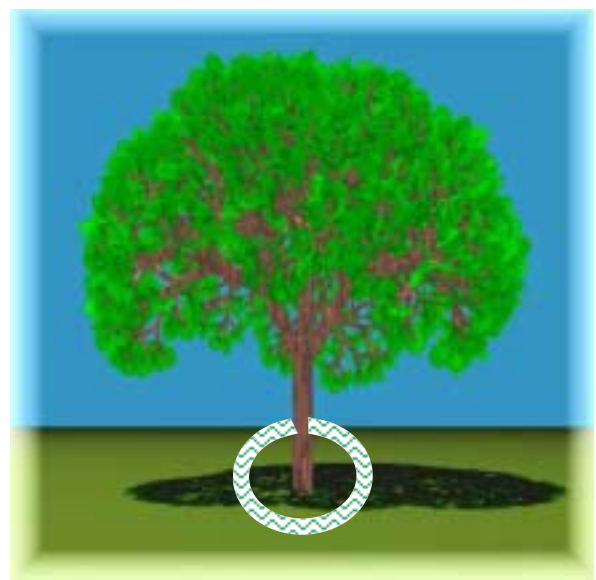
Turf Cutting Patterns

You discover that if you always mow in a circle around a tree the tires of the mower will compact the turf and leave tire marks. Each week you change the pattern you follow around the trees.

Diagonal Pattern



Circular Pattern



Safety First

Remember to slow down when going around a tree, and remain at least 1 foot away from the base of the tree when mowing.





Tree Safety

You remember your first day as an Equipment Operator and how anxious you were to jump on the machine and begin mowing. However, before you were allowed to even sit on the seat of the mower, your trainer had a very serious discussion about the importance of protecting our trees.



Safety First

Your trainer begins by describing to you how the trunk of a tree acts as the carrier of nutrients and water, which the tree needs to survive and grow.

The trunk of a tree is composed of several basic parts. The bark of the tree is the outer covering of dead tissue that protects the tree from weather, disease, insects, fire and mechanical injury (example: mower or string trimmer cuts).

Immediately inside the bark is a thin layer of living cells called the Phloem used for transporting food around the tree.

And next to the Phloem is a layer containing dead, thick cells (called Xylem) that act as pipes for transporting water and nutrients up the tree.

These areas of the tree are fairly thin and can be easily damaged. When this happens, the food, water and nutrients can't travel up the tree, often resulting in a dead tree!

This picture shows a tree trunk that has been damaged by a mower. This damage could kill the tree!



NEVER MOW CLOSER THAN 1 FOOT FROM THE BASE OF A TREE!!!





The Different Mowers





The Trim Mower



As an Equipment Operator III, you have had the opportunity to use all of the different types of mowers. You let your mind wander, remembering the things you had to know about each one.

The first mower you were trained to use was the Trim Mower, which is used after the larger mowers have done their job. It is used to do edging,

trim along fence lines, around shrub beds, and between trees. This mower is used in places that are too small for the larger mowers like small parks, and medians. Because a lot of the work this mower performs is around trees, you remember how important it was to stay at least a foot away from the base of any tree to make sure you don't cause any damage. It's up to the String Trimmers to do the very close trimming.

The chutes on this mower can be located on either the left or the right. The chute must always be positioned to blow onto the mowed turf rather than onto un-mowed turf, streets, sidewalks, tree and shrub beds or passers-by.

To begin mowing, you start at a slow speed and throttle, engage the blades, and increase to full throttle in order to cut. It is important to always keep the engine RPMs at full operating speed when mowing. If it is necessary to slow your ground speed, back off on the hydrostatic transmission pedal rather than reducing the engine RPMs.





Trim Mower Circle Check List

Each morning after blowing off the deck and radiator you do your circle check.

Turf Cutting Handbook



The first few times you performed these tasks; you had to follow the instructions in the Operator's Manual.





Trim Mower

As well as your circle check there are a number of things you will need to maintain on this mower.



Maintenance Check List

- ☒ Items that need to be checked on the John Deere Mower will be labeled in yellow!
- ☒ Daily blow out the radiator (the front panel slides off of this unit). To clean the radiator, unscrew the bolt.
- ☒ Check mower deck blades for chips and sharpness.
- ☒ Change the air cleaner when the indicator located above radiator turns to red.
- ☒ Grease PTO Drive Shaft Universal Joints.
- ☒ Check brakes and forward and reverse pedals.
- ☒ Check the air pressure in the tires.
- ☒ Check the lug nuts on the wheels.





The 11-Foot Mower

After safely operating the Trim Mower for a number of seasons, you were given the opportunity to use the 11' mower. This mower is almost twice as wide as the Trim Mower and is used to mow the smaller irrigated areas and parks in the community.

The biggest difference between the 11' mower and the 72" trimmer is the size of the machine and the number of different controls you are required to use. The first thing you did when you learned you'd be operating an 11' mower was read the Operator's Manual.



Note: *The engine will not start on this machine unless the Power Take Off (PTO) is off, and the hydrostatic pedals are in the centered (neutral position).*



Safety First

Always get on and off from the left side of the machine to avoid bumping controls and pedals.



Safety First — Hydraulic Leaks

Never put your finger over a hydraulic leak. The pressure of the leak will break through the skin and get into your blood stream.





11-Foot Mower Circle Check List

Each morning after blowing off the deck and radiator you do your circle check.



Circle Check List

- ☒ Test safety systems.
- ☒ Check tire pressure.
- ☒ Check fuel level.
- ☒ Check engine, transmission, and hydraulic oil levels.
- ☒ Remove grass and debris from engine compartment and muffler area.
- ☒ Check air intake screen.
- ☒ Check area below machine for leaks.
- ☒ Check air restriction indicator.
- ☒ Check engine coolant level.
- ☒ Check for hydraulic leaks.
- ☒ Slow moving sign is clearly visible 

The first few times you performed these tasks, you had to follow the instructions in the Operator's Manual.





11-Foot Mower

You review the maintenance check list you were given during the equipment training you received by the equipment operator.



Maintenance Check List

- ☒ Lubricate caster wheels and caster arm bushings.
- ☒ Lubricate the mower blade spindles.
- ☒ Lubricate the front deck lift arms.
- ☒ Check for bent or dull mower blades.

Once a week:

- ☒ Check the battery fluid level once a week. Clean the battery posts as needed.
- ☒ Check the torque of the bolts on the wheel.
- ☒ Inspect bolts and air pressure of tires.
- ☒ Check the mechanical four wheel drive (MFWD) oil level.





15-Foot Mower

You're finally given the chance to operate the 15-foot mower.

You'll be using this 'big boy' to mow the large irrigated areas and parks in the community; the first thing you do is read the Operator's Manual.



Transporting this Mower

Before you leave the depot you learn that you need to raise the mower deck wings and put the transport pins in the lock-up position before you can travel.



Safety First

Never raise the mower decks when the blades are running.

When you arrive at the site, you move the transport pins from lock-up position to operating position and lower the wings.



Safety First

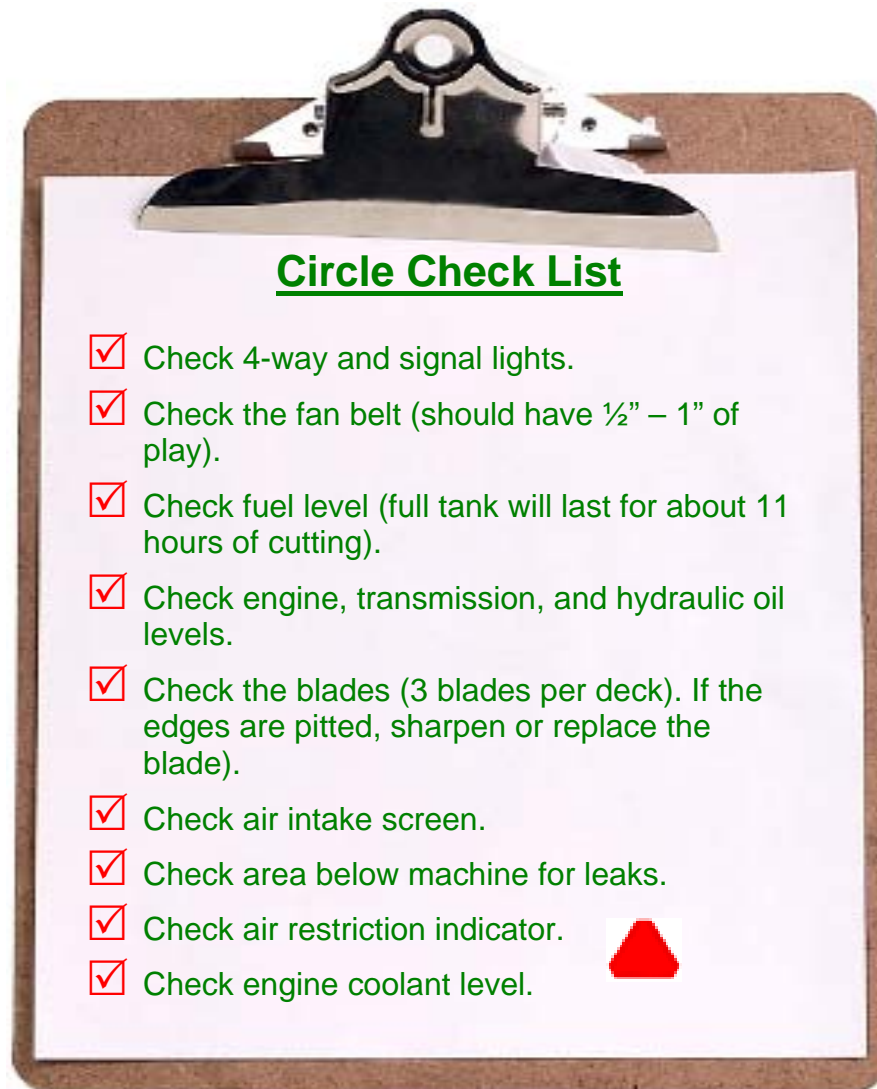
Watch for tree stumps or other items that may be sticking out of the grass. These can damage the blades or the mower deck.





15-Foot Mower Circle Check List

Each morning after blowing off the deck and radiator you do your circle check.



The first few times you performed these tasks; you had to follow the instructions in the Operator's Manual.





15-Foot Mower

You review the maintenance check list you were given during the equipment training you received from the equipment operator.



Maintenance Check List

- ☒ Lubricate caster wheels and caster arm bushings (20 places).
- ☒ Lubricate the mower blade spindles (7 places).
- ☒ Lubricate the front deck lift arms (4 places).
- ☒ Check for bent or dull mower blades.

Once a week:

- ☒ Check the battery fluid level once a week. Clean the battery posts as needed.
- ☒ Check the wheel belt torque.
- ☒ Inspect tires and check air pressure.
- ☒ Check the mechanical four wheel drive (MFWD) oil level.





Coarse Grass Mowers...



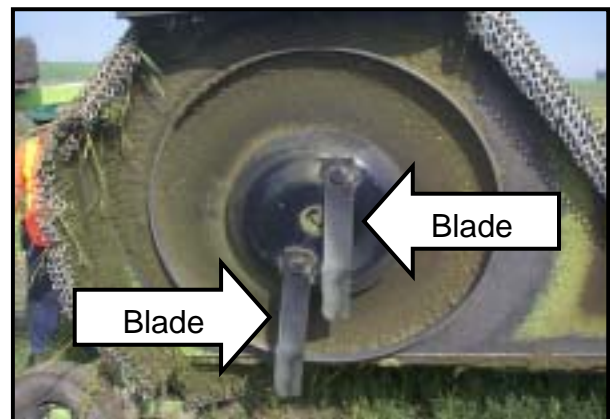
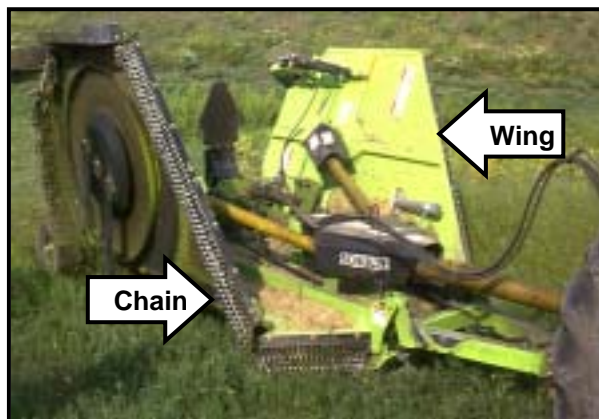


Batwing Mower

The next mower you get a chance to operate is the Batwing. This is the biggest mower the community uses! The Batwing is used to mow un-irrigated coarse grass areas found in storm channels, and along roadways and highways.



The Batwing mower uses large blades that rotate to cut heavy vegetation and brush (up to 3 ½" in diameter).



The blades are located under the wings and centre section and should be replaced every week. These wings are raised when transporting the mower and then lowered when cutting the vegetation. The chains along the wing are used to stop debris from being thrown.





Batwing Mower Circle Check List


Just as you did with the other mowers, blow off the machine and then perform the circle check.



Safety First

Install the transport pins for wings and center frames **BEFORE** doing any service or repair work on the cutter.

Circle Check List

- ☒ Blades are to be checked daily. Blades should always be replaced in pairs.
- ☒ Check the tightness of the blade bolts.
- ☒ Check the safety chain located on draw-bar hitch. Replace the entire chain if any link or end fitting is broken, stretched or deformed in any way.
- ☒ Weekly, check hubs for bearing play and seal condition.
- ☒ Weekly, check all nuts and bolts for tightness.
- ☒ Weekly, check the condition of cotter pins, roll pins and other fasteners (replace if necessary).
- ☒ Weekly, check walking beams for bearing play and seal condition.
- ☒ Slow moving sign is clearly visible 





Transporting the Batwing

You learn that one of the most important things you have to remember about transporting the Batwing is using the wing lock-up pins. These pins make sure the wings don't drop while the mower is being transported to the area to be mowed.



Side Lock-up Pin

Center Lock-up Pin

There are three transport lock-up pins at the back of the mower that are to be used to lock the wings in the raised position for transportation — one pin is located at each side, and one in the centre.



Safety First

When transporting this mower you travel at a maximum speed of 15 km/hr. All warning lights must be flashing when traveling.

NEVER STAND BETWEEN THE TRACTOR AND THE MOWER WHEN THE TRACTOR IS BEING BACKED TO THE HITCH.





Procedures and Safety Tips

You soon find out that the most important thing about using this machine is watching out for debris. Because this machine is used to mow areas where the vegetation can be very high and thick, large debris can often be hidden and very hard to see (for example, tires, concrete, bottles etc.). The mowers can throw objects a great distance (100 yards or more). Thrown objects can cause serious injury or death.



Safety First

Do not let the Blades turn when the Mower Deck is raised for any reason. Never engage the PTO when the wings aren't horizontal. Make sure the wings are up.

Raising the Mower Deck exposes the Cutting Blades. This creates a severe hazard and could cause serious injury or even death from objects thrown from the Blades.

You're told that you don't need to worry about alternating your mowing patterns when you're using the Batwing. When mowing along roadways, you'll start by facing the traffic, mow a straight row, turn, and work the second row overlapping the cut row by 8" continuing this pattern until you're finished.

You remember that when mowing a very steep slope, you drive up and down the slope rather than across. You learn that this machine is fairly stable even on steep slopes, but you don't make any turns on extreme slopes. You certainly don't want to take the chance of rolling the tractor.

When you have to drive on a road surface to get around an overpass, you remember to raise the wings, disengage the Power Take Off (PTO) and wait for the traffic to clear. When it's clear you increase your speed and get around the overpass as quickly as possible.





Batwing Mower Maintenance

During your equipment training you learned that there were a number of areas on the Batwing that needed to be greased throughout the day.



Maintenance Check List

Every 4 hours grease the following:

- ☒ Drive Shaft — apply 20 shots.
- ☒ Constant Velocity Body — apply 20 pumps.
- ☒ Telescoping Tubes — Apply grease to the collar located at the middle of the shaft.

Every 8 hours grease the following:

- ☒ Cross Journals —lubricate until grease purges from underneath all four bearing caps.
- ☒ Shield Retaining Bearings — apply 3 pumps.
- ☒ Frame Pivot Points: 1 Hitch clevis
 - 2 Hitch swivels
 - 2 Hitch frames
 - 4 Lift Rods
 - 3 Main Lifts
 - 4 Wheel Standards
 - 5 Wing Lifts

Once a week: Grease the 6 Wheel Hubs.





The Whirlwind Mower

You recall having the opportunity of using the Whirlwind mower. This mower is pulled by a small tractor and used to cut coarse grass in areas that are too small for the 15 Ft. Bat Wing (for example, easements).



Procedures and Safety Tips

Similar to the Batwing, it is important for you to inspect the area where you will be doing the mowing, so that you can remove any debris and large objects that may damage the blades, or people and vehicles in the area.

You always disengage the clutch and shift into neutral before starting the engine. And before attempting to make adjustments, repairs or inspections of the mower you stop the engine, disengage the Power Take Off (PTO) and remove the keys from the ignition. You also always allow the blades to come to a full stop before you attempt to get anywhere close to them.

The cutter should always be operated in the highest position possible that will give you the desired cut length, as this will minimize the chance of the blades contacting the ground, or the possibility of the blades picking up and discharging debris.





Whirlwind Mower Maintenance



Maintenance Check List

Daily do the following:

- ☒ Inspect the blades daily for chips, cracks or bends.
- ☒ Retighten the blade mounting bolts.
- ☒ Check the gearbox oil level.

In addition to the daily maintenance:

- ☒ Replace the blades as required (always replace in pairs).
- ☒ Check all nuts and bolts for tightness weekly.
- ☒ Check the bearings on the wheel hubs weekly for play and the condition of the seal.



Safety First

When hitching up the mower to the tractor, never stand between the tractor and the mower.

Always make sure that a slow moving vehicle sign is visible from the rear of the mower when traveling on public roads.

Never transport the mower unless all lock up pins are in place.





At The End of The Day

The day is done and you look across the park and visually inspect the grass that you just finished cutting. That couple from the United States was right, you do have a demanding job! You think about all of your training, all of your knowledge and all of the hard work that you have enjoyed so much over the years.



You can take pride in knowing that you have made a difference. You think to yourself about how someone from another community or country can walk into our parks or green space and truly appreciate the beauty of our community. That's the difference that you make every day. You make our community a great place to live and visit!





Mowing Irrigated Grass - Operation Checklist

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Task:

To mow irrigated grass areas to a standard height of 1½" for Athletic Turf (e.g. football, soccer or softball fields), and 3" for Irrigated Parks.

Safety Equipment:

- ☐ Safety glasses or face shield
- ☐ Ear protection (muffler and/or plugs)
- ☐ Florescent orange safety vest or jersey
- ☐ Slow-moving vehicle warning sign
- ☐ Rear view mirror (15' mower)
- ☐ Roll bar, or overhead canopy (no hardhat required if overhead canopy in place)
- ☐ Fire extinguisher

Expected Results:

The area should look tidy and even. There should be no un-mowed areas, no ruts, no litter, no excessive clippings, and no damaged trees or objects.

Operating Tips:

- ☐ Never start mower until seated on operator's seat.
- ☐ Be sure warning lights are flashing when traveling.
- ☐ Be careful mounting curbs. Use curb cuts whenever possible.
- ☐ Adjust blade height while stopped on even ground. Never put hands or feet under blade guards.
- ☐ On 15' mower, always secure wings with transport lock-up pins before traveling or doing maintenance. Never allow blades to turn while wings up. Never lower wings with anyone standing nearby. Never fold wings on a slope.
- ☐ Large mowers should cut area before trimmers.
- ☐ 15' or 11' mowers – Stay at least 5 feet away from trees. Mow 2 rows around perimeter, then back & forth. Overlap each row by 8". Change direction each week (vertical, horizontal, diagonal rows).
- ☐ Trimmers – Stay at least 2 feet away from trees.
- ☐ Make sure clippings spray into park areas, not into flower or shrub beds, streets, walkways, etc.
- ☐ Do not operate if anyone is within 100 yards. If a group is using the park, work in another area.



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Mowing Irrigated Grass - Operation Checklist

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Operating Tips Continued...

- ☐ Avoid new sod and wet areas as tires will create ruts.
- ☐ Do not mow over debris or nests. Inspect areas of long grass and remove glass, bottles & other debris before mowing. Watch for chunks of pavement or concrete, especially in areas adjacent to streets.
- ☐ Drive across slopes, not up and down. Do not turn on extreme slopes.
- ☐ Avoid tree stumps or other protrusions.
- ☐ If trashcans are full, remove and tie bag and leave it next to the trashcan. Replace with new bag.
- ☐ Be sure to grease mower regularly, according to manufacturer's instructions.
- ☐ If you are caught outside during a storm, seek shelter in a low area away from trees and other structures. If lightening is close, return to depot or call for pickup.
- ☐ Report any damage or deficiencies to supervisor.





Mowing Coarse Grass - Operation Checklist

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Task:

To mow naturalized, coarse grass areas to a standard height of 8".

Tools and Equipment:

- ☐ 15' Bat Wing – large areas
- ☐ Whirlwind – smaller areas (e.g. utility easements)
- ☐ Grease gun

Additional Safety Equipment Required:

- ☐ Safety glasses or face shield
- ☐ Ear protection (muffler and/or plugs)
- ☐ Florescent orange safety vest or jersey
- ☐ Slow-moving vehicle symbol on rear of tractor/mower
- ☐ Flashing lights on tractor unit
- ☐ Roll bar & debris screen shield, or full cab
- ☐ Seatbelt
- ☐ Two-way radio

Expected Results:

The area should look tidy and even. There should be no un-mowed areas, no ruts, no litter, and no damaged trees, nests or objects.

Operating Tips:

- ☐ Never start mower until seated on tractor seat.
- ☐ Always secure wings and centre frame with transport lock-up pins before traveling or doing maintenance. Be sure warning lights are flashing when traveling.
- ☐ Adjust blade height while stopped on level ground. Never put hands or feet under blade guards.
- ☐ Never allow blades to turn while wings up. Never lower wings with anyone standing nearby.
- ☐ Do not operate if anyone is within 100 yards.
- ☐ Mow at 3 – 4 MPH, in B2 gear, at 1700 – 2400 RPM. Speed determines clean cut.
- ☐ Mow straight down one pass, turn around and do a straight pass back again. Overlap each pass (or mowed row) by 8 inches. Face traffic for first pass along roadways.





Mowing Coarse Grass - Operation Checklist

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Operating Tips Continued...

- ☐ Avoid wet areas as tires will create deep ruts.
- ☐ Drive across slopes, not up and down. Do not turn on extreme slopes. Ends of storm channels may need to be left un-mowed if too steep to maneuver safely. Never fold wings on a slope.
- ☐ Kick off Power Take Off (PTO) when backing up. Avoid mowing in reverse.
- ☐ Watch for nests, debris, power lines and unmarked obstacles such as catch basins. Collect litter; move debris if possible; go around obstacles.
- ☐ To drive on road surface to get around an overpass, raise wings, kick off PTO, wait for traffic to clear, raise speed, and get around overpass quickly.
- ☐ Be sure to grease mower regularly, according to manufacturer's instructions.
- ☐ Sharpen blades daily. If one blade needs replacing, always replace both to maintain balance and safety.
- ☐ If you are caught outside during a storm, seek shelter in a low area away from trees and other structures. If lightening is close, return to depot or call for pickup.
- ☐ Report any damage or deficiencies to supervisor.





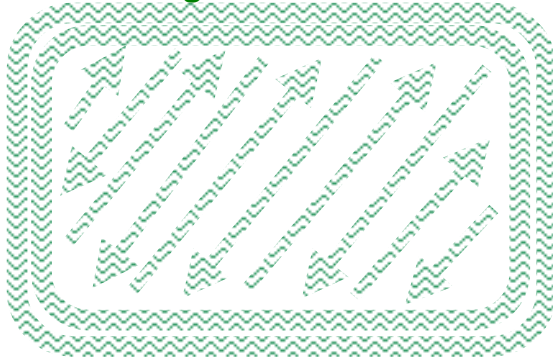
Cutting Patterns

When mowing irrigated turf it's important to mow in a different direction or pattern each time you mow an area. Begin by mowing two rows around the outside border and then complete the middle section. When mowing boulevards, mow around the outside border and then work back and forth to complete the center.

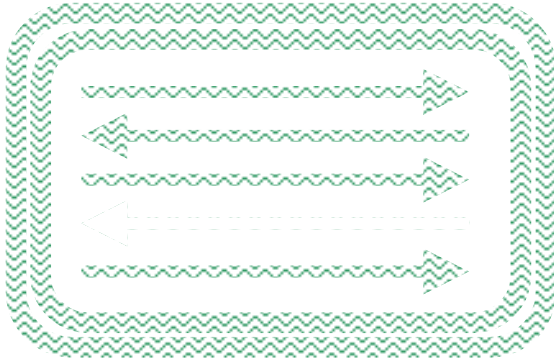
Vertical Pattern



Diagonal Pattern



Horizontal Pattern





Circle Check List

- ☐ Test safety systems.
- ☐ Check the tire pressure.
- ☐ Check fuel level.
- ☐ Check engine, transmission, and hydraulic oil levels.
- ☐ Remove grass and debris from engine compartment and muffler area.
- ☐ Check air intake screen.
- ☐ Check area below machine for leaks.
- ☐ Check air restriction indicator.
- ☐ Check engine coolant level.
- ☐ Slow moving sign is clearly visible.

Basic Mower Safety

- ☒ Keep your hands and feet away from the mower deck when the engine is running.
- ☒ Never carry passengers.
- ☒ You'll need to use extreme caution when mounting curbs. Use the curb cuts if they are available and make sure the blades aren't moving.





Maintenance Check List

- ☐ Lubricate caster wheels and caster arm bushings (20 places).
- ☐ Lubricate the mower blade spindles (7 places).
- ☐ Lubricate the front deck lift arms (4 places).
- ☐ Check for bent or dull mower blades.

Once a week:

- ☐ Check the battery fluid level once a week. Clean the batter posts as needed.
- ☐ Check the wheel belt torque.
- ☐ Inspect tires and check air pressure.
- ☐ Check the mechanical four wheel drive (MFWD) oil level.

Basic Mower Safety

- ☒ Never add fuel while you smoke, or when the engine is running or hot.
- ☒ Add fuel outdoors where there's plenty of ventilation.
- ☒ You'll always lower any attachments to the ground before you service the machine.
- ☒ Always wear your hardhat unless you are sitting on a mower that has a canopy.

